Harry `~ ji

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re:

Harrington, et al.

Group Art Unit: Not Yet Assigned

Appl. No.:

Not Yet Assigned

Examiner:

Not Yet Assigned

Filed:

Filed Concurrently Herewith

For:

COMPOSITIONS AND METHODS FOR NON-TARGETED ACTIVATION

OF ENDOGENOUS GENES

February 25, 2000

REQUEST FOR TRANSFER OF COMPUTER READABLE FORM OF SEQUENCE **LISTING UNDER 37 CFR §1.821(e) AND MPEP 2422.05**

Box Patent Application Assistant Commissioner for Patents Washington, DC 20231

Sir:

Applicants hereby request transfer of previously filed sequence information into the above-mentioned application, concurrently filed herewith.

I hereby state that the paper copy of the sequence listing, attached hereto, is identical to the computer-readable copy of the sequence listing filed in U.S. Application Serial No. 09/276,820, filed on March 26, 1999. In accordance with 37 CFR §1.821(e) and MPEP 2422.05, please use the computer-readable form filed in that application as the computer-readable form for the above-mentioned application. It is understood that the Patent and Trademark Office will make the necessary change in application number and filing date for the present application.

Respectfully submitted,

Anne Brown

Attorney for Applicant Registration No. 36,463

ALSTON & BIRD LLP

Post Office Drawer 34009 Charlotte, NC 28234

Tel Raleigh Office (919) 420-2200

Fax Raleigh Office (919) 420-2260

"Express Mail" Mailing Label Number EL039496210US

Date of Deposit: February 25, 2000

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to Box Patent Application, Assistant Commissioner of Patents, Washington, DC 20231.

Nora C. Martinez

RTA01/2074310v1

SEQUENCE LISTING

- <120> Compositions and Methods for Non-targeted Activation of Endogenous Genes
- <130> 1522.0030004/MAC/BJD
- <140> To be assigned
- <141> 1999-03-26
- <150> To be assigned
- <151> 1999-03-08
- <150> 09/253,022
- <151> 1999-02-19
- <150> 09/159,643
- <151> 1998-09-24
- <150> 08/941,223
- <151> 1997-09-26
- <160> .17
- <170> PatentIn Ver. 2.0
- <210> 1
- <211> 39
- <212> DNA
- <213> Homo sapiens
- <400> 1
- tecttegaag ettgteatgg ttggtteget aaactgeat

```
<210> 2
<211> 40
<212> DNA
<213> Homo sapiens
<400> 2
aaacttaaga tcgattaatc attcttctca tatacttcaa
                                                                     40
<210> 3
<211> 28
<212> DNA
<213> Homo sapiens
<400> 3
                                                                    28
atccaccatg gctacaggtg agtactcg
<210> 4
<211> 36
<212> DNA
<213> Homo sapiens
<400> 4
                                                                    36
gatccgagta ctcacctgta gccatggtgg atttaa
<210> 5
<211> 33
<212> DNA
<213> Homo sapiens
<400> 5
                                                                     33
ggcgagatct agcgctatat gcgttgatgc aat
<210> 6
<211> 51
<212> DNA
<213> Homo sapiens
```

```
<400> 6
```

ggccagatet getacettaa gagageegaa acaagegete atgageeega a

51

<210> 7

<211> 6084

<212> DNA

<213> Homo sapiens

<400> 7

agatetteaa tattggeeat tageeatatt atteattggt tatatageat aaateaatat 60 . tggctattgg ccattgcata cgttgtatct atatcataat atgtacattt atattggctc 120 atgtccaata tgaccgccat gttggcattg attattgact agttattaat agtaatcaat 180 tacggggtca ttagttcata gcccatatat ggagttccgc gttacataac ttacggtaaa 240 tqqccqqcct ggctgaccgc ccaacgaccc ccgcccattg acgtcaataa tgacgtatgt 300 tcccatagta acgccaatag ggactttcca ttgacgtcaa tgggtggagt atttacggta 360 aactgcccac tiggcagtac atcaagtgta tcatatgcca agtccgcccc ctattgacgt 420 caatgacggt aaatggcccg cctggcatta tgcccagtac atgaccttac gggactttcc 480 tacttggcag tacatctacg tattagtcat cgctattacc atggtgatgc ggttttggca 540 gtacaccaat gggcgtggat agcggtttga ctcacgggga tttccaagtc tccacccat 600 tgacgtcaat gggagtttgt tttggcacca aaatcaacgg gactttccaa aatgtcgtaa 660 caactgcgat cgcccgcccc gttgacgcaa atgggcggta ggcgtgtacg gtgggaggtc 720 tatataagca gagctcgttt agtgaaccgt cagatcacta gaagctttat tgcggtagtt 780 tatcacagtt aaattgctaa cgcagtcagt gcttctgaca caacagtctc gaacttaagc 840 tgcagtgact ctcttaatta actccaccag tctcacttca gttccttttg cctccaccag 900 teteaettea gtteettttg catgaagage teagaateaa aagaggaaac caaccectaa 960 gatgagettt ccatgtaaat ttgtagecag etteettetg attttcaatg tttettecaa 1020 aggtgcagtc tccaaagaga ttacgaatgc cttggaaacc tggggtgcct tgggtcagga 1080 catcaacttg gacattccta gttttcaaat gagtgatgat attgacgata taaaatggga 1140 aaaaacttca gacaagaaaa agattgcaca attcagaaaa gagaaagaga ctttcaagga 1200 aaaagataca tataagctat ttaaaaaatgg aactctgaaa attaagcatc tgaagaccga 1260 tgatcaggat atctacaagg tatcaatata tgatacaaaa ggaaaaaatg tgttggaaaa 1320 aatatttgat ttgaagattc aagagagggt ctcaaaacca aagatctcct ggacttgtat 1380 caacacaacc ctgacctgtg aggtaatgaa tggaactgac cccgaattaa acctgtatca 1440 agatgggaaa catctaaaac tttctcagag ggtcatcaca cacaagtgga ccaccagcct 1500 gagtgcaaaa ttcaagtgca cagcagggaa caaagtcagc aaggaatcca gtgtcgagcc 1560 tgtcagctgt ccagagaaag ggatccaggt gagtagggcc cgatccttct agagtcgagc 1620 tctcttaagg tagcaaggtt acaagacagg tttaaggaga ccaatagaaa ctgggcttgt 1680

cgagacagag aagactettg cgtttetgat aggcacetat tggtettacg cggccgcgaa 1740 ttccaagett gagtatteta tegtgtcace taaataaett ggegtaatea tggtcatate 1800 tgtttcctgt gtgaaattgt tatccgctca caattccaca caacatacga gccggaagca 1860 taaagtgtaa agcctggggt gcctaatgag tgagctaact cacattaatt gcgttgcgcg 1920 atgetteeat tttgtgaggg ttaatgette gagaagacat gataagatae attgatgagt 1980 ttggacaac cacaacaaga atgcagtgaa aaaaatgctt tatttgtgaa atttgtgatg 2040 ctattgcttt atttgtaacc attataagct gcaataaaca agttaacaac aacaattgca 2100 ttcattttat gtttcaggtt cagggggaga tgtggggaggt tttttaaagc aagtaaaacc 2160 tctacaaatg tggtaaaatc cgataaggat cgattccgga gcctgaatgg cgaatggacg 2220 cgccctgtag cggcgcatta agcgcggcgg gtgtggtggt tacgcgcacg tgaccgctac 2280 acttgccage gccctagege cegeteettt egetttette cetteettte tegecaegtt 2340 cgccggcttt ccccgtcaag ctctaaatcg ggggctccct ttagggttcc gatttagtgc 2400 tttacggcac ctcgacccca aaaaacttga ttagggtgat ggttcacgta gtgggccatc 2460 gccctgatag acggtttttc gccctttgac gttggagtcc acgttcttta atagtggact 2520 cttgttccaa actggaacaa cactcaaccc tatctcggtc tattcttttg atttataagg 2580 gattttgccg atttcggcct attggttaaa aaatgagctg atttaacaaa aatttaacgc 2640 gaattttaac aaaatattaa cgcttacaat ttcgcctgtg taccttctga ggcggaaaga 2700 accagetgtg gaatgtgtgt eagttagggt gtggaaagte eccaggetee ecageaggea 2760 gaagtatgca aagcatgcat ctcaattagt cagcaaccag gtgtggaaag tccccaggct 2820 ccccagcagg cagaagtatg caaagcatgc atctcaatta gtcagcaacc atagtcccgc 2880 ccctaactcc gcccatcccg cccctaactc cgcccagttc cgcccattct ccgccccatg 2940 gctgactaat tttttttatt tatgcagagg ccgaggccgc ctcggcctct gagctattcc 3000 agaagtagtg aggaggettt tttggaggee taggettttg caaaaagett gattettetg 3060 acacaacagt ctcgaactta aggctagagc caccatgatt gaacaagatg gattgcacgc 3120 aggttctccg gccgcttggg tggagaggct attcggctat gactgggcac aacagacaat 3180 eggetgetet gatgeegeeg tgtteegget gteagegeag gggegeeegg ttetttttgt 3240 caagaccgac ctgtccggtg ccctgaatga actgcaggac gaggcagcgc ggctatcgtg 3300 getggecaeg aegggegtte ettgegeage tgtgetegae gttgteaetg aagegggaag 3360 ggactggctg ctattgggcg aagtgccggg gcaggatete etgteatete acettgetee 3420 tgccgagaaa gtatccatca tggctgatgc aatgcggcgg ctgcatacgc ttgatccggc 3480 tacctgccca ttcgaccacc aagcgaaaca tcgcatcgag cgagcacgta ctcggatgga 3540 agecggtett gtegateagg atgatetgga egaagageat eaggggeteg egecageega 3600 actgttcgcc aggctcaagg cgcgcatgcc cgacggcgag gatctcgtcg tgacccatgg 3660 cgatgcctgc ttgccgaata tcatggtgga aaatggccgc ttttctggat tcatcgactg 3720 tggccggctg ggtgtggcgg accgctatca ggacatagcg ttggctaccc gtgatattgc 3780 tgaagagett ggeggegaat gggetgaeeg etteetegtg etttaeggta tegeegetee 3840 cgattcgcag cgcatcgcct tctatcgcct tcttgacgag ttcttctgag cgggactctg 3900

gggttcgaaa tgaccgacca agcgacgccc aacctgccat cacgatggcc gcaataaaat 3960 atctttattt tcattacatc tgtgtgttgg ttttttgtgt gaagatccgc gtatggtgca 4020 ctctcagtac aatctgctct gatgccgcat agttaagcca gccccgacac ccgccaacac 4080 eegetgaege geeetgaegg gettgtetge teeeggeate egettaeaga caagetgtga 4140 cegteteegg gagetgeatg tgteagaggt ttteacegte ateacegaaa egegegagae 4200 gaaagggcct cgtgatacgc ctatttttat aggttaatgt catgataata atggtttctt 4260 agacgtcagg tggcactttt cggggaaatg tgcgcggaac ccctatttgt ttattttct 4320 aaatacattc aaatatgtat ccgctcatga gacaataacc ctgataaatg cttcaataat 4380 attgaaaaag gaagagtatg agtattcaac atttccgtgt cgcccttatt cccttttttg 4440 eggeattttg cetteetgtt tttgeteace cagaaacget ggtgaaagta aaagatgetg 4500 aagatcagtt gggtgcacga gtgggttaca tcgaactgga tctcaacagc ggtaagatcc 4560 ttgagagttt tcgccccgaa gaacgttttc caatgatgag cacttttaaa gttctgctat. 4620 gtggcgcggt attatcccgt attgacgccg ggcaagagca actcggtcgc cgcatacact 4680 atteteagaa tgaettggtt gagtaeteac cagteacaga aaageatett aeggatggea 4740 tgacagtaag agaattatgc agtgctgcca taaccatgag tgataacact gcggccaact 4800 tacttctgac aacgatcgga ggaccgaagg agctaaccgc ttttttgcac aacatggggg 4860 atcatgtaac tegeettgat egttgggaac eggagetgaa tgaagecata ceaaaegaeg 4920 agcgtgacac cacgatgcct gtagcaatgg caacaacgtt gcgcaaacta ttaactggcg 4980 aactacttac tctagcttcc cggcaacaat taatagactg gatggaggcg gataaagttg 5040 caggaccact tetgegeteg gecetteegg etggetggtt tattgetgat aaatetggag 5100 ceggtgageg tgggtetege ggtateattg cageaetggg gecagatggt aageeeteee 5160 gtatcgtagt tatctacacg acggggagtc aggcaactat ggatgaacga aatagacaga 5220 togotgagat aggtgootca otgattaago attggtaact gtoagaccaa gtttactcat 5280. tttttgataa tctcatgacc aaaatccctt aacgtgagtt ttcgttccac tgagcgtcag 5400 accccgtaga aaagatcaaa ggatcttctt gagatccttt ttttctgcgc gtaatctgct 5460 gcttgcaaac aaaaaaacca ccgctaccag cggtggtttg tttgccggat caagagctac 5520 caactetttt teegaaggta aetggettea geagagegea gataceaaat aetgteette 5580 tagtgtagcc gtagttaggc caccacttca agaactctgt agcaccgcct acatacctcg 5640 ctctgctaat cctgttacca gtggctgctg ccagtggcga taagtcgtgt cttaccgggt 5700 tggactcaag acgatagtta ccggataagg cgcagcggtc gggctgaacg gggggttcgt 5760 gcacacagcc cagettggag egaaegaeet acacegaaet gagataeeta cagegtgage 5820 tatgagaaag cgccacgctt cccgaaggga gaaaggcgga caggtatccg gtaagcggca 5880 gggtcggaac aggagagcgc acgagggagc ttccaggggg aaacgcctgg tatctttata 5940 gtcctgtcgg gtttcgccac ctctgacttg agcgtcgatt tttgtgatgc tcgtcagggg 6000 ggcggagcet atggaaaaac gccagcaacg cggccttttt acggttcctg gccttttgct 6060 ggccttttgc tcacatggct cgac 6084

<210> 8 <211> 6085 <212> DNA

<213> Homo sapiens

<400> 8

agatetteaa tattggeeat tageeatatt atteattggt tatatageat aaateaatat 60 tggctattgg ccattgcata cgttgtatct atatcataat atgtacattt atattggctc 120 atgtccaata tgaccgccat gttggcattg attattgact agttattaat agtaatcaat 180 tacggggtca ttagttcata gcccatatat ggagttccgc gttacataac ttacggtaaa 240 tggcccgcct ggctgaccgc ccaacgaccc ccgcccattg acgtcaataa tgacgtatgt 300 teccatagta aegecaatag ggaettteea ttgaegteaa tgggtggagt atttaeggta 360 aactgeeeae ttggeagtae ateaagtgta teatatgeea agteegeeee etattgaegt 420 caatgacggt aaatggcccg cctggcatta tgcccagtac atgaccttac gggactttcc 480 tacttggcag tacatctacg tattagtcat cgctattacc atggtgatgc ggttttggca 540 gtacaccaat gggcgtggat agcggtttga ctcacgggga tttccaagtc tccacccat 600 tgacgtcaat gggagtttgt tttggcacca aaatcaacgg gactttccaa aatgtcgtaa 660 caactgcgat cgcccgcccc gttgacgcaa atgggcggta ggcgtgtacg gtgggaggtc 720 tatataagca gagctcgttt agtgaaccgt cagatcacta gaagctttat tgcggtagtt 780 tatcacagtt aaattgctaa cgcagtcagt gcttctgaca caacagtctc gaacttaagc 840 tgcagtgact ctcttaatta actccaccag tctcacttca gttccttttg cctccaccag 900 tctcacttca gttccttttg catgaagagc tcagaatcaa aagaggaaac caacccctaa 960 gatgagettt ecatgtaaat ttgtageeag etteettetg atttteaatg tttetteeaa 1020 aggtgcagtc tccaaagaga ttacgaatgc cttggaaacc tggggtgcct tgggtcagga 1080 catcaacttg gacattccta gttttcaaat gagtgatgat attgacgata taaaatggga 1140 aaaaacttca gacaagaaaa agattgcaca attcagaaaa gagaaagaga ctttcaagga 1200 aaaagataca tataagctat ttaaaaaatgg aactctgaaa attaagcatc tgaagaccga 1260 tgatcaggat atctacaagg tatcaatata tgatacaaaa ggaaaaaatg tgttggaaaa 1320 aatatttgat ttgaagattc aagagagggt ctcaaaacca aagatctcct ggacttgtat 1380 caacacacc ctgacctgtg aggtaatgaa tggaactgac cccgaattaa acctgtatca 1440 agatgggaaa catctaaaac tttctcagag ggtcatcaca cacaagtgga ccaccagcct 1500 gagtgcaaaa ttcaagtgca cagcagggaa caaagtcagc aaggaatcca gtgtcgagcc 1560 tgtcagctgt ccagagaaag ggatcccagg tgagtagggc ccgatccttc tagagtcgag 1620 ctctcttaag gtagcaaggt tacaagacag gtttaaggag accaatagaa actgggcttg 1680 tegagacaga gaagactett gegtttetga taggeaceta ttggtettae geggeegega 1740 attccaaget tgagtattet ategtgteac etaaataaet tggegtaate atggteatat 1800

ctgtttcctg tgtgaaattg ttatccgctc acaattccac acaacatacg agccggaagc 1860 ataaagtgta aagcctgggg tgcctaatga gtgagctaac tcacattaat tgcgttgcgc 1920 gatgetteea ttttgtgagg gttaatgett cgagaagaca tgataagata cattgatgag 1980 tttggacaaa ccacaacaag aatgcagtga aaaaaatgct ttatttgtga aatttgtgat 2040 gctattgctt tatttgtaac cattataagc tgcaataaac aagttaacaa caacaattgc 2100 attcatttta tgtttcaggt tcagggggag atgtgggagg ttttttaaag caagtaaaac 2160 ctctacaaat gtggtaaaat ccgataagga tcgattccgg agcctgaatg gcgaatggac 2220 gegeeetgta geggegeatt aagegeggeg ggtgtggtgg ttaegegeae gtgaeegeta 2280 caettgccag cgccctagcg cccgctcctt tcgctttctt cccttccttt ctcgccacgt 2340 tegeeggett teecegteaa getetaaate gggggeteee tttagggtte egatttagtg 2400 ctttacggca cctcgacccc aaaaaacttg attagggtga tggttcacgt agtgggccat 2460 cgccctgata gacggttttt cgccctttga cgttggagtc cacgttcttt aatagtggac 2520 tettgtteca aactggaaca acactcaace etateteggt etattetttt gatttataag 2580 ggattttgcc gatttcggcc tattggttaa aaaatgagct gatttaacaa aaatttaacg 2640 cgaattttaa caaaatatta acgcttacaa tttcgcctgt gtaccttctg aggcggaaag 2700 aaccagctgt ggaatgtgtg tcagttaggg tgtggaaagt ccccaggctc cccagcaggc 2760 agaagtatgc aaagcatgca tctcaattag tcagcaacca ggtgtggaaa gtccccaggc 2820 tccccagcag gcagaagtat gcaaagcatg catctcaatt agtcagcaac catagtcccg 2880 cccctaactc cgcccatccc gcccctaact ccgcccagtt ccgcccattc tccgccccat 2940 ggctgactaa tttttttat ttatgcagag gccgaggccg cctcggcctc tgagctattc 3000 cagaagtagt gaggaggctt ttttggaggc ctaggctttt gcaaaaagct tgattcttct 3060 gacacaacag tetegaactt aaggetagag ecaccatgat tgaacaagat ggattgcacg 3120 caggttetee ggeegettgg gtggagagge tatteggeta tgaetgggea caacagacaa 3180 teggetgete tgatgeegee gtgtteegge tgteagegea ggggegeeeg gttetttttg 3240 tcaagaccga cctgtccggt gccctgaatg aactgcagga cgaggcagcg cggctatcgt 3300 ggctggccac gacgggcgtt ccttgcgcag ctgtgctcga cgttgtcact gaagcgggaa 3360 gggactggct gctattgggc gaagtgccgg ggcaggatct cctgtcatct caccttgctc 3420 ctgccgagaa agtatccatc atggctgatg caatgcggcg gctgcatacg cttgatccgg 3480 ctacctgccc attcgaccac caagcgaaac atcgcatcga gcgagcacgt actcggatgg 3540 aagceggtet tgtegateag gatgatetgg aegaagagea teaggggete gegeeageeg 3600 aactgttcgc caggetcaag gegegeatge cegaeggega ggatetegte gtgaeceatg 3660 gegatgeetg ettgeegaat ateatggtgg aaaatggeeg ettttetgga tteategaet 3720 gtggccggct gggtgtggcg gaccgctatc aggacatagc gttggctacc cgtgatattg 3780 ctgaagaget tggeggegaa tgggetgace getteetegt getttaeggt ategeegete 3840 ccgattcgca gcgcatcgcc ttctatcgcc ttcttgacga gttcttctga gcgggactct 3900 ggggttcgaa atgaccgacc aagcgacgcc caacctgcca tcacgatggc cgcaataaaa 3960 tatctttatt ttcattacat ctgtgtgttg gttttttgtg tgaagatccg cgtatggtgc 4020

acteteagta caatetgete tgatgeegea tagttaagee ageeeegaca eeegeeaaca 4080 cccgctgacg cgccctgacg ggcttgtctg ctcccggcat ccgcttacag acaagctgtg 4140 acceptctccg ggagctgcat gtgtcagagg ttttcaccept catcaccgaa acgcgcgaga 4200 cgaaagggcc tcgtgatacg cctattttta taggttaatg tcatgataat aatggtttct 4260 tagacgtcag gtggcacttt tcggggaaat gtgcgcggaa cccctatttg tttattttc 4320 taaatacatt caaatatgta teegeteatg agacaataac eetgataaat getteaataa 4380 tattgaaaaa ggaagagtat gagtattcaa catttccgtg tcgcccttat tcccttttt 4440 gcggcatttt gccttcctgt ttttgctcac ccagaaacgc tggtgaaagt aaaagatgct 4500 gaagatcagt tgggtgcacg agtgggttac atcgaactgg atctcaacag cggtaagatc 4560 cttgagagtt ttcgccccga agaacgtttt ccaatgatga gcacttttaa agttctgcta 4620 tgtggcgcgg tattatcccg tattgacgcc gggcaagagc aactcggtcg ccgcatacac 4680 tatteteaga atgaettggt tgagtaetea eeagteaeag.aaaageatet taeggatgge 4740 atgacagtaa gagaattatg cagtgctgcc ataaccatga gtgataacac tgcggccaac 4800 ttacttctga caacgatcgg aggaccgaag gagctaaccg cttttttgca caacatgggg 4860 gatcatgtaa ctcgccttga tcgttgggaa ccggagctga atgaagccat accaaacgac 4920 gagcgtgaca ccacgatgcc tgtagcaatg gcaacaacgt tgcgcaaact attaactggc 4980 gaactactta ctctagcttc ccggcaacaa ttaatagact ggatggaggc ggataaagtt 5040 gcaggaccac ttctgcgctc ggcccttccg gctggctggt ttattgctga taaatctgga 5100 geeggtgage gtgggteteg eggtateatt geageactgg ggeeagatgg taagecetee 5160 cgtatcgtag ttatctacac gacggggagt caggcaacta tggatgaacg aaatagacag 5220 atcgctgaga taggtgcctc actgattaag cattggtaac tgtcagacca agtttactca 5280 tatatacttt agattgattt aaaacttcat ttttaattta aaaggatcta ggtgaagatc 5340 ctttttgata atctcatgac caaaatccct taacgtgagt tttcgttcca ctgagcgtca 5400 gaccccgtag aaaagatcaa aggatcttct tgagatcctt tttttctgcg cgtaatctgc 5460 tgcttgcaaa caaaaaaacc accgctacca gcggtggttt gtttgccgga tcaagagcta 5520 ccaactettt tteegaaggt aactggette ageagagege agataceaaa tactgteett 5580 ctagtgtagc cgtagttagg ccaccacttc aagaactctg tagcaccgcc tacatacctc 5640 getetgetaa teetgttaee agtggetget geeagtggeg ataagtegtg tettaeeggg 5700 ttggactcaa gacgatagtt accggataag gcgcagcggt cgggctgaac ggggggttcg 5760 tgcacacagc ccagcttgga gcgaacgacc tacaccgaac tgagatacct acagcgtgag 5820 ctatgagaaa gcgccacgct tcccgaaggg agaaaggcgg acaggtatcc ggtaagcggc 5880 agggtcggaa caggagagcg cacgagggag cttccagggg gaaacgcctg gtatctttat 5940 agtectgteg ggtttegeea cetetgaett gagegtegat ttttgtgatg etegteaggg 6000 gggcggagcc tatggaaaaa cgccagcaac gcggcctttt tacggttcct ggccttttgc 6060 tggccttttg ctcacatggc tcgac 6085

<211> 6086 <212> DNA

<213> Homo sapiens

<400> 9

agatcttcaa	tattggccat	tagccatatt	attcattggt	tatatagcat	aaatcaatat	60
tggctattgg	ccattgcata	cgttgtatct	atatcataat	atgtacattt	atattggctc	120
atgtccaata	tgaccgccat	gttggcattg	attattgact	agttattaat	agtaatcaat	180
tacggggtca	ttagttcata	gcccatatat	ggagttccgc	gttacataac	ttacggtaaa	240
tggcccgcct	ggctgaccgc	ccaacgaccc	ccgcccattg	acgtcaataa	tgacgtatgt	300
tcccatagta	acgccaatag	ggactttcca	ttgacgtcaa	tgggtggagt	atttacggta	360
aactgcccac	ttggcagtac	atcaagtgta	tcatatgcca	agtccgcccc	ctattgacgt	420
caatgacggt	aaatggcccg	cctggcatta	tgcccagtac	atgaccttac	gggactttcc	480
tacttggcag	tacatctacg	tattagtcat	cgctattacc	atggtgatgc	ggttttggca	540
gtacaccaat	gggcgtggat	agcggtttga	ctcacgggga	tttccaagtc	tccaccccat	600
tgacgtcaat	gggagtttgt	tttggcacca	aaatcaacgg	gactttccaa	aatgtcgtaa	660
caactgcgat	cgcccgcccc	gttgacgcaa	atgggcggta	ggcgtgtacg	gtgggaggtc	720
tatataagca	gagctcgttt	agtgaaccgt	cagatcacta	gaagctttat	tgcggtagtt	7 80
tatcacagtt	aaattgctaa	cgcagtcagt	gcttctgaca	caacagtctc	gaacttaagc	840
tgcagtgact	ctcttaatta	actccaccag	tctcacttca	gttccttttg	cctccaccag	900
tctcacttca	gttccttttg	catgaagagc	tcagaatcaa	aagaggaaac	caacccctaa	960
gatgagcttt	ccatgtaaat	ttgtagccag	cttccttctg	attttcaatg	tttcttccaa	1020
aggtgcagtc	tccaaagaga	ttacgaatgc	cttggaaacc	tggggtgcct	tgggtcagga	1080
catcaacttg	gacattccta	gttttcaaat	gagtgatgat	attgacgata	taaaatggga	1140
aaaaacttca	gacaagaaaa	agattgcaca	attcagaaaa	gagaaagaga	ctttcaagga	1200
aaaagataca	tataagctat	ttaaaaatgg	aactctgaaa	attaagcatc	tgaagaccga	1260
tgatcaggat	atctacaagg	tatcaatata	tgatacaaaa	ggaaaaaatg	tgttggaaaa	1320
aatatttgat	ttgaagattc	aagagagggt	cțcaaaacca	aagatctcct	ggacttgtat	1380
caacacaacc	ctgacctgtg	aggtaatgaa	tggaactgac	cccgaattaa	acctgtatca	1440
agatgggaaa	catctaaaac	tttctcagag	qqtcatcaca	cacaagtgga	ccaccagcct	1500
gagtgcaaaa	ttcaagtgca	cagcagggaa	caaagtcagc	aaggaatcca	gtgtcgagcc	1560
tgtcagctgt	ccagagaaag	ggatccacag	gtgagtaggg	cccgatcctt	ctagagtcga	1620
gctctcttaa	ggtagcaagg	ttacaagaca	ggtttaagga	gaccaataga	aactgggctt	1680
gtcgagacag	agaagactct	tgcgtttctg	ataggcacct	attggtctta	cgcggccgcg	1740
aattccaagc	ttgagtattc	tatcgtgtca	cctaaataac	ttggcgtaat	catggtcata	1800
tctgtttcct	gtgtgaaatt	gttatccgct	cacaattcca	cacaacatac	gagccggaag	1860
cataaagtgt	aaagcctggg	gtgcctaatg	agtgagctaa	ctcacattaa	ttgcgttgcg	1920

cgatgcttcc attttgtgag ggttaatgct tcgagaagac atgataagat acattgatga 1980 gtttggacaa accacaacaa gaatgcagtg aaaaaaatgc tttatttgtg aaatttgtga 2040 tgctattgct ttatttgtaa ccattataag ctgcaataaa caagttaaca acaacaattg 2100 cattcatttt atgtttcagg ttcaggggga gatgtgggag gttttttaaa gcaagtaaaa 2160 cctctacaaa tgtggtaaaa tccgataagg atcgattccg gagcctgaat ggcgaatgga 2220 cgcgccctgt agcggcgcat taagcgcggc gggtgtggtg gttacgcgca cgtgaccgct 2280 acacttgcca gcgccctagc gcccgctcct ttcgctttct tcccttcctt tctcgccacg 2340 ttcgccggct ttccccgtca agctctaaat cgggggctcc ctttagggtt ccgatttagt 2400 getttaegge acetegaece caaaaaaett gattagggtg atggtteaeg tagtgggeea 2460 tegecetgat agaeggtttt tegecetttg aegttggagt ceaegttett taatagtgga 2520 ctcttqttcc aaactggaac aacactcaac cctatctcgg tctattcttt tgatttataa 2580 gggattttgc cgatttcggc ctattggtta aaaaatgagc tgatttaaca aaaatttaac 2640 qcqaatttta acaaaatatt aacgcttaca atttcgcctg tgtaccttct gaggcggaaa 2700 gaaccagctg tggaatgtgt gtcagttagg gtgtggaaag tccccaggct ccccagcagg 2760 cagaagtatg caaagcatgc atctcaatta gtcagcaacc aggtgtggaa agtccccagg 2820 ctccccagca ggcagaagta tgcaaagcat gcatctcaat tagtcagcaa ccatagtccc 2880 gecectaaet eegeceatee egecectaae teegeceagt teegeceatt eteegececa 2940 tggctgacta atttttttta tttatgcaga ggccgaggcc gcctcggcct ctgagctatt 3000 ccagaagtag tgaggaggct tttttggagg cctaggcttt tgcaaaaagc ttgattcttc 3060 tgacacaaca gtctcgaact taaggctaga gccaccatga ttgaacaaga tggattgcac 3120 gcaggttctc cggccgcttg ggtggagagg ctattcggct atgactgggc acaacagaca 3180 ateggetget etgatgeege egtgtteegg etgteagege aggggegeee ggttettttt 3240 gtcaagaccg acctgtccgg tgccctgaat gaactgcagg acgaggcagc gcggctatcg 3300 tggctggcca cgacgggcgt tccttgcgca gctgtgctcg acgttgtcac tgaagcggga 3360 agggactggc tgctattggg cgaagtgccg gggcaggatc tcctgtcatc tcaccttgct 3420 cctgccgaga aagtatccat catggctgat gcaatgcggc ggctgcatac gcttgatccg 3480 gaagccggtc ttgtcgatca ggatgatctg gacgaagagc atcaggggct cgcgccagcc 3600 gaactgttcg ccaggctcaa ggcgcgcatg cccgacggcg aggatctcgt cgtgacccat 3660 ggcgatgcct gcttgccgaa tatcatggtg qaaaatggcc gcttttctgg attcatcgac 3720 tgtggccggc tgggtgtggc ggaccgctat caggacatag cgttggctac ccgtgatatt 3780 gctgaagagc ttggcggcga atgggctgac cgcttcctcg tgctttacgg tatcgccgct 3840 cccgattcgc agcgcatcgc cttctatcgc cttcttgacg agttcttctg agcgggactc 3900 tggggttcga aatgaccgac caagcgacgc ccaacctgcc atcacgatgg ccgcaataaa 3960 atatetttat titeattaca teigigigit ggittittigi gigaagatee gegiaiggig 4020 cacteteagt acaatetget etgatgeege atagttaage cageecegae accegecaae 4080 accegetgae gegeeetgae gggettgtet geteeeggea teegettaea gacaagetgt 4140

				•		
gaccgtctcc	gggagctgca	tgtgtcagag	gttttcaccg	tcatcaccga	aacgcgcgag	4200
acgaaagggc	ctcgtgatac	gcctattttt	ataggttaat	gtcatgataa	taatggtttc	4260
ttagacgtca	ggtggcactt	ttcggggaaa	tgtgcgcgga	acccctattt	gtttattttt	4320
ctaaatacat	tcaaatatgt	atccgctcat	gagacaataa	ccctgataaa	tgcttcaata	4380
atattgaaaa	aggaagagta	tgagtattca	acatttccgt	gtcgccctta	ttcccttttt	4440
tgcggcattt	tgccttcctg	tttttgctca	cccagaaacg	ctggtgaaag	taaaagatgc	4500
tgaagatcag	ttgggtgcac	gagtgggtta	catcgaactg	gatctcaaca	gcggtaagat	4560
ccttgagagt	tttcgccccg	aagaacgttt	tccaatgatg	agcactttta	aagttctgct	4620
atgtggcgcg	gtattatccc	gtattgacgc	cgggcaagag	caactcggtc	gccgcataca	4680
ctattctcag	aatgacttgg	ttgagtactc	accagtcaca	gaaaagcatc	ttacggatgg	4740
catgacagta	agagaattat	gcagtgctgc	cataaccatg	agtgataaca	ctgcggccaa	4800
cttacttctg	acaacgatcg	gaggaccgaa	ggagctaacc	gcttttttgc	acaacatggg	4860
ggatcatgta	actcgccttg	atcgttggga	accggagctg	aatgaagcca	taccaaacga	4920
cgagcgtgac	accacgatgc	ctgtagcaat	ggcaacaacg	ttgcgcaaac	tattaactgg	4980
cgaactactt	actctagctt	cccggcaaca	attaatagac	tggatggagg	cggataaagt	5040
tgcaggacca	cttctgcgct	cggcccttcc	ggctggctgg	tttattgctg	ataaatctgg	5100
agccggtgag	cgtgggtctc	gcggtatcat	tgcagcactg	gggccagatg	gtaagccctc	5160
ccgtatcgta	gttatctaca	cgacggggag	tcaggcaact	atggatgaac	gaaatagaca	5220
gatcgctgag	ataggtgcct	cactgattaa	gcattggtaa	ctgtcagacc	aagtttactc	5280
atatatactt	tagattgatt	taaaacttca	tttttaattt	aaaaggatct	aggtgaagat	5340
cctttttgat	aatctcatga	ccaaaatccc	ttaacgtgag	ttttcgttcc	actgagcgtc	5400
agaccccgta	gaaaagatca	aaggatcttc	ttgagatcct	ttttttctgc	gcgtaatctg	5460
.ctgcttgcaa	acaaaaaaac	caccgctacc	agcggtggtt	tgtttgccgg	atcaagagct	5520
accaactctt	tttccgaagg	taactggctt	cagcagagcg	cagataccaa	atactgtcct	5580
tctagtgtag	ccgtagttag	gccaccactt	caagaactct	gtagcaccgc	ctacatacct	5640
cgctctgcta	atcctgttac	cagtggctgc	tgccagtggc	gataagtcgt	gtcttaccgg	5700
gttggactca	agacgatagt	taccggataa	ggcgcagcgg	tcgggctgaa	cggggggttc	5760
gtgcacacag	cccagcttgg	agcgaacgac	ctacaccgaa	ctgagatacc	tacagcgtga	5820
gctatgagaa	agcgccacgc	ttcccgaagg	gagaaaggcg	gacaggtatc	cggtaagcgg	5880
cagggtcgga	acaggagagc	gcacgaggga	gcttccaggg	ggaaacgcct	ggtatcttta	5940
*	gggtttcgcc					
ggggcggagc	ctatggaaaa	acgccagcaa	cgcggccttt	ttacggttcc	tggccttttg	6060
ctggcctttt	gctcacatgg	ctcgac				6086

<210> 10

<211> 38

<212> DNA

<213> Artificial sequence

of the first of the of him the that that and ļm k

The second secon

in p

<400> 16

<400> 13

<211> 20

<212> DNA

<213> Artificial sequence

<221> OTHER

<222> 1

<223> 3' thymidine at position #20 is biotinylated

<223> Description of artificial sequence: synthetic oligonucleotide

<400> 17

tcgtcagaat tcagtgatct

20